SIEMENS

ARCADIS Orbic

SP

Installation and Startup

System

3D Navigation

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3D navigation with the ARCADIS Orbic

Fig. 1: Navigation systems

Fig. 2: 3D_marker ring

The 3D navigation kit is a universal HW and SW interface which serves navigation systems from different navigation companies (Fig. 1 / p. 4).

The navigation system itself is supplied by a navigation company.

The supplied grid holder on the image intensifier is usually the interface to the “removable marker ring”. An engineer from the navigation company is responsible for attaching the active or passive marker ring (Fig. 2 / p. 4) to the I.I. of the Is C 3D.

A Siemens engineer is responsible for attaching the grid holder to the image intensifier, testing and loading the SW, calibration without the marker ring on the I.I., as well as configuration.

An additional calibration must be performed with the navigation system installed (marker ring on the I. I.). Therefore, an engineer from the navigation company must be participate in the calibration.

Two engineers use a test body to check the interaction of the two systems and the overall accuracy.

The test body always remains with the customer.

The overlap time of the two engineers is approx. 2 hours.

The navigation system is handed over by the navigation company.

General requirement

Support for startup from the navigation company should be provided on site.

Required documents

System configuration	SPR2-320.843.02.01.02
Image quality test	SPR2-320.820.02.01.02

System requirement

ARCADIS system software VB11 or higher.

Required parts

TCP/IP type cross-over cable for a direct connection to the navigation system (not included in the shipment).

TCP/IP cable for a connection to the navigation system via the clinical network (not included in the shipment).

3D navigation kit: 80 81 452

Required license key

3D navigation license key	Part No.: 80 81 528
3D license key	Part No.: 80 81 502

Tools

Tool kit

Safety information

⚠WARNING

Risk of physical injury or death and property damage!

Non-compliance can lead to death, physical injury or property damage.

Strictly follow:

- ➪ **The product-specific safety information in these instructions**
- ➪ **The general safety information in the instructions TD00-000.860.01...**
- ➪ **The general safety information according to ARTD part 2.**

Functional check

- Prior to the installation of the 3D navigation kit, check that the system is functioning properly.
- Visually inspect the 3D navigation kit and the calibration phantom with navigation interface to ensure they are in good condition.

Work sequence

Installing the TCP/IP cable

- Plug the TCP/IP cross-over cable into the monitor trolley and into the 3D navigation system (see figure below).

NOTE

If the ARCADIS system is connected to the navigation system via the clinical network, there can be problems if the load on the clinical network is heavy.

Fig. 3: Plug

Attaching the HW interface to the image intensifier

Fig. 4: I.I._01

Fig. 5: I.I._02

Fig. 6: I.I._03

Fig. 7: I. I. _ new

- Remove the screws of the grid holder (Fig. 4 / p. 7).
- Detach the microswitch, pinch it off and insulate the cable with insulating tape (Fig. 5 / p. 8).
- Detach the grid from the grid holder. The gaskets are no longer needed.
- Apply a little silicone 20 48 981 all around the fitting of the grid holder 75 51 703 and press down the grid, making sure it is correctly positioned in the grid holder.

NOTICE

Ensure the grid is properly oriented in the grid holder and the C-arm assembly is correctly oriented.

➪ **See (Fig. 7 / p. 9)**

- Wait for the silicone to harden (approx. 30 min.).
- Attach the grid holder to the I.I. and secure it with screws 11 22 571 and contact washers 34 16 666.

Attaching the identification label

Fig. 8: Label

- Attach the identification label 75 51 828 to the unit as shown in the illustration.

Configuring the network node

- Switch on the system.
- Click <Options> - <Service> - <Local Service>.
- Enter the password and click <ok>.
- Click <Configuration>.
- "**Attached to Network**" and "**Dicom Networking**" must be selected.
- Click <**Next**>.

Fig. 9: Configuration

- Under “DICOM”, click <**Network Nodes**> (see (Fig. 10 / p. 12))
- Select “**define new**” under “Select Host”.
- Enter the host name of the navigation system under “Host Properties”.

  “**navigationsys**” in the figure below is only an example.
- Check that navigation system is connected and ready.
- Click “**Find**” to check whether the host is alive and also that the TCP/IP address from the navigation system appears into the address fields.

  Connected by
- Select LAN
- Click <**Save**>.
- Click “>”.

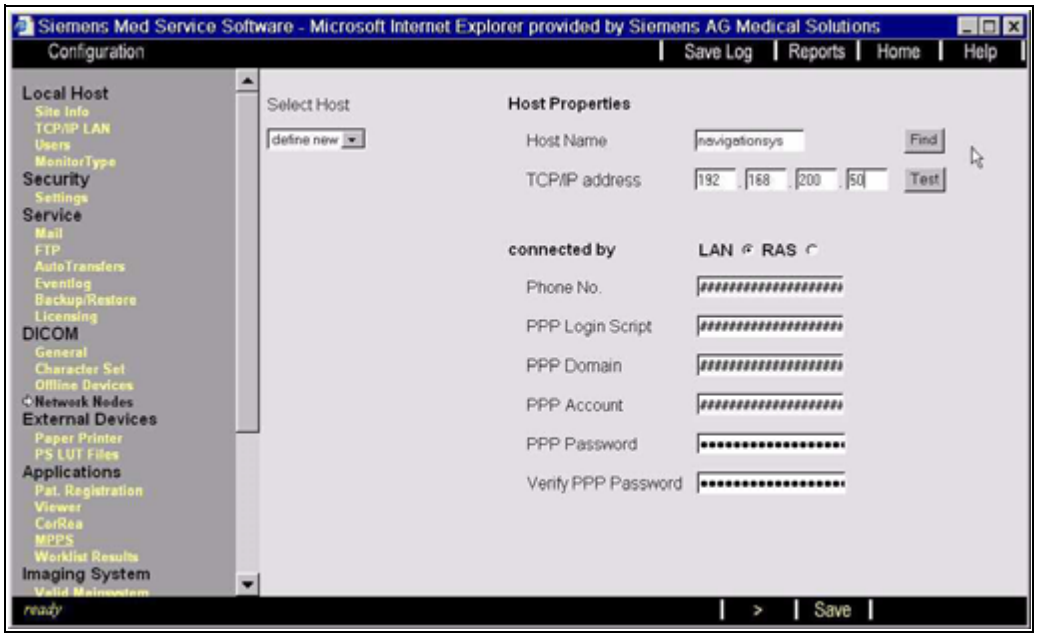


Fig. 10: navhost

General node properties

- Select “define new” under “Logical Name” to edit the logical name “**NAV3D**_XXX” (XXX = logical name of navigation system).

NOTE

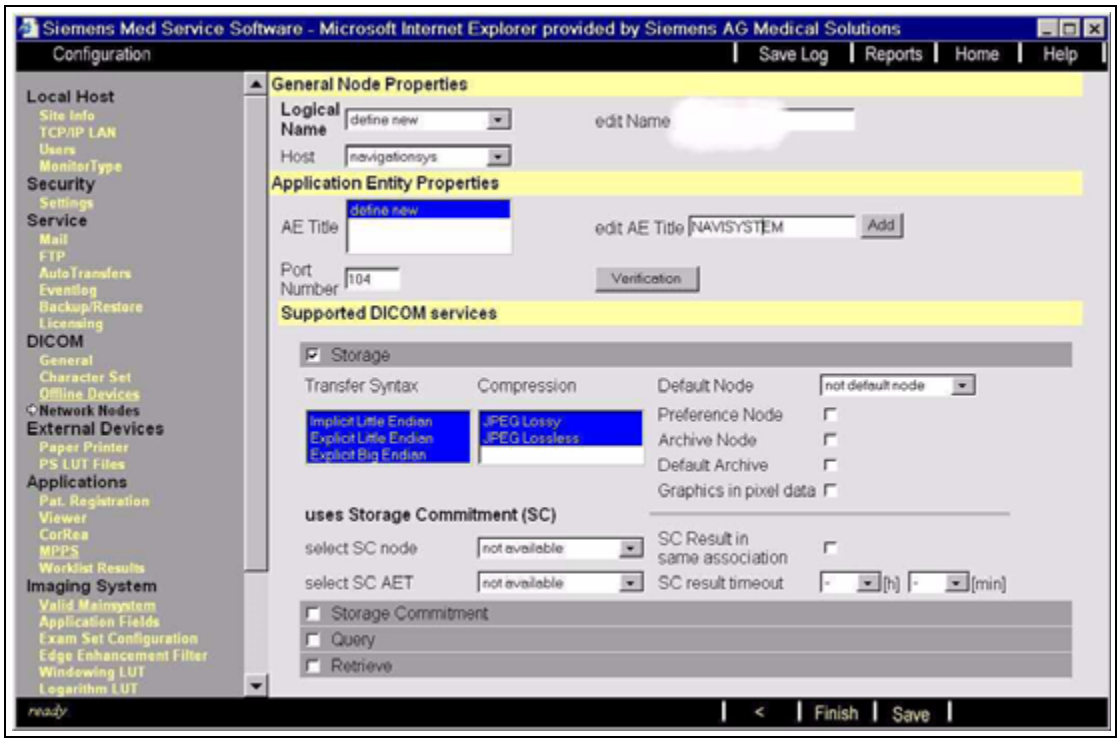
If the ARCADIS system is connected to a 3D navigation system, the logical name should be “NAV3D_XXX” (XXX = logical name of Navigation system).

- Edit the DICOM AE Title of the navigation system under “Application Entity Properties” (see (Fig. 11 / p. 13)).

  “**NAVISYSTEM**” in the figure below is only an example.
- Under Port Number, enter “**104**”.

  If port no. 104 does not work, check whether the navigation system is using e.g. port 105.
- Click <Add>.
- Click <**Verification**> to make sure the “AE Title” is alive.
- Select <**Storage**> under “Supported DICOM services”.
- Click <**Save**>.
- Click ok

  ➪ The system starts a reboot.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Configuration
Save Log
Reports
Home
Help
Local Host
Site Info
TCP/IP LAN
Users
MonitorType
Security
Settings
Service
Mail
FTP
AutoTransfers
Eventlog
Backup/Restore
Licensing
DICOM
General
Character Set
Offline Devices
Network Nodes
External Devices
Paper Printer
PS LUT Files
Applications
Pat. Registration
Viewer
CorRea
MPPS
Worklist Results
Imaging System
Valid Mainsystem
Application Fields
Exam Set Configuration
Edge Enhancement Filter
Windowing LUT
Logarithm LUT
General Node Properties
Logical Name
define new
edit Name
Host
navigationsys
Application Entity Properties
AE Title
define new
edit AE Title
NAVISYSTEM
Add
Port Number
104
Verification
Supported DICOM services
Storage
Transfer Syntax
Compression
Implicit Little Endian
Explicit Little Endian
Explicit Big Endian
JPEG Lossy
JPEG Lossless
Default Node
not default node
Preference Node
Archive Node
Default Archive
Graphics in pixel data
uses Storage Commitment (SC)
select SC node
not available
select SC AET
not available
SC Result in same association
SC result timeout
[h]
[min]
Storage Commitment
Query
Retrieve
ready
<
Finish
Save

Fig. 11: NAVD

Final work steps

- Perform a function check.
- Perform the Image Quality Quick Test SPR2-320.820.02.01.02, chapter 10 and 11.

Chapter 2: Change of Fig.7